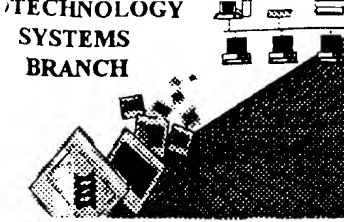


A. Kubel



RAW SEQUENCE LISTING ERROR REPORT

#18

The Biotechnology Systems Branch of the Scientific and Technical Information Center (STIC) detected errors when processing the following computer readable form:

Application Serial Number: 09/661,016A
Source: 1600 Rush
Date Processed by STIC: 7/21/2003

THE ATTACHED PRINTOUT EXPLAINS DETECTED ERRORS.
PLEASE FORWARD THIS INFORMATION TO THE APPLICANT BY EITHER:
1) INCLUDING A COPY OF THIS PRINTOUT IN YOUR NEXT COMMUNICATION TO THE APPLICANT, WITH A NOTICE TO COMPLY or,
2) TELEPHONING APPLICANT AND FAXING A COPY OF THIS PRINTOUT, WITH A NOTICE TO COMPLY
FOR CRF SUBMISSION AND PATENTIN SOFTWARE QUESTIONS, PLEASE CONTACT MARK SPENCER, 703-308-4212.

TO REDUCE ERRORED SEQUENCE LISTINGS, PLEASE USE THE CHECKER VERSION 4.0 PROGRAM, ACCESSIBLE THROUGH THE U.S. PATENT AND TRADEMARK OFFICE WEBSITE. SEE BELOW FOR ADDRESS:
<http://www.uspto.gov/web/offices/pac/checker>

Applicants submitting genetic sequence information electronically on diskette or CD-Rom should be aware that there is a possibility that the disk/CD-Rom may have been affected by treatment given to all incoming mail. Please consider using alternate methods of submission for the disk/CD-Rom or replacement disk/CD-Rom. Any reply including a sequence listing in electronic form should NOT be sent to the 20231 zip code address for the United States Patent and Trademark Office, and instead should be sent via the following to the indicated addresses:

1. EFS-Bio (<<http://www.uspto.gov/efc/efs/downloads/documents.htm>> , EFS Submission User Manual - ePAVE)
2. U.S. Postal Service: Commissioner for Patents, P.O. Box 1450, Alexandria, VA 22313-1450
3. Hand Carry directly to:
U.S. Patent and Trademark Office, Technology Center 1600, Reception Area, 7th Floor, Examiner Name, Sequence Information, Crystal Mall One, 1911 South Clark Street, Arlington, VA 22202
Or
U.S. Patent and Trademark Office, Box Sequence, Customer Window, Lobby, Room 1B03, Crystal Plaza Two, 2011 South Clark Place, Arlington, VA 22202
4. Federal Express, United Parcel Service, or other delivery service to: U.S. Patent and Trademark Office, Box Sequence, Room 1B03-Mailroom, Crystal Plaza Two, 2011 South Clark Place, Arlington, VA 22202



1600

RAW SEQUENCE LISTING

DATE: 07/21/2003

PATENT APPLICATION: US/09/661,016A

TIME: 14:07:36

Input Set : A:\pto.amc.txt

Output Set: N:\CRF4\07212003\I661016A.raw

4 <110> APPLICANT: Van Mellaert, Herman
 5 Botterman, Johan
 6 Van Rie, Jeroen
 7 Joos, Henk
 8 <120> TITLE OF INVENTION: RECOMBINANT PLANT EXPRESSING NON-COMPETITIVELY BINDING BT
 INSECTICIDAL
 9 CRYSTAL PROTEINS
 10 <130> FILE REFERENCE: 021565-879
 W--> 13 <140> CURRENT APPLICATION NUMBER: 09/661,061A
 OK--> 15 <141> CURRENT FILING DATE: 2000-09-13
 16 <150> PRIOR APPLICATION NUMBER: PCT/EP90/00905
 17 <151> PRIOR FILING DATE: 1990-05-30
 18 <150> PRIOR APPLICATION NUMBER: GB 89401499.2
 19 <151> PRIOR FILING DATE: 1989-05-31
 E--> 23 <160> NUMBER OF SEQ ID NOS: (8) 10 (see pp 7,12)
 25 <170> SOFTWARE: PatentIn Ver. 2.0

pp 1,4,7,12

IMPORTANT: Please
 save file in ASCII text,
 Does not comply as
 Corrected Data Needed required
 by
 Sequence
 Rules

ERRORED SEQUENCES

300 <210> SEQ ID NO: 6
 301 <211> LENGTH: 1163
 302 <212> TYPE: CDS
 303 <213> ORGANISM: Bacillus thuringiensis p.4
 304 <400> SEQUENCE: 6
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 310 20 25 30
 311 Thr Val Ala Asp Ile Ser Leu Gly Leu Ile Asn Phe Leu Tyr Ser Asn
 312 35 40 45
 313 Phe Val Pro Gly Gly Gly Phe Ile Val Gly Leu Leu Glu Leu Ile Trp
 314 50 55 60
 315 Gly Phe Ile Gly Pro Ser Gln Trp Asp Ile Phe Leu Ala Gln Ile Glu
 316 65 70 75 80
 317 Gln Leu Ile Ser Gln Arg Ile Glu Glu Phe Ala Arg Asn Gln Ala Ile
 318 85 90 95
 319 Ser Arg Leu Glu Gly Leu Ser Asn Leu Tyr Lys Val Tyr Val Arg Ala
 320 100 105 110
 321 Ile Ser Asp Trp Glu Lys Asp Pro Thr Asn Pro Ala Leu Arg Glu Glu
 322 115 120 125
 323 Met Arg Ile Gln Phe Asn Asp Met Asn Ser Ala Leu Ile Thr Ala Ile
 324 130 135 140
 325 Pro Leu Phe Arg Val Gln Asn Tyr Glu Val Ala Leu Leu Ser Val Tyr

RAW SEQUENCE LISTING

DATE: 07/21/2003

PATENT APPLICATION: US/09/661,016A

TIME: 14:07:37

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433          180          185          190
435 Ser Asp Leu Thr Ser Leu Ile His Val Tyr Thr Asn His Cys Val Asp
436          195          200          205
438 Thr Tyr Asn Gln Gly Leu Arg Arg Leu Glu Gly Arg Phe Leu Ser Asp
439          210          215          220
441 Trp Ile Val Tyr Asn Arg Phe Arg Arg Gln Leu Thr Ile Ser Val Leu
442          225          230          235
444 Asp Ile Val Ala Phe Phe Pro Asn Tyr Asp Ile Arg Thr Tyr Pro Ile
445          240          245          250
447 Gln Thr Ala Thr Gln Leu Thr Arg Glu Val Tyr Leu Asp Leu Pro Phe
448          255          260          265
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451          270          275          280
453 Ala Glu Ser Ala Ile Ile Arg Ser Pro His Leu Val Asp Phe Leu Asn
454          285          290          295
456 Ser Phe Thr Ile Tyr Thr Asp Ser Leu Ala Arg Tyr Ala Tyr Trp Gly
457          300          305          310
459 Gly His Leu Val Asn Ser Phe Arg Thr Gly Thr Thr Thr Asn Leu Ile
460          315          320          325
462 Arg Ser Pro Leu Tyr Gly Arg Glu Gly Asn Thr Glu Arg Pro Val Thr
463          330          335          340
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466          345          350          355
468 Thr Gly Leu Asp Asn Ser Asn Pro Val Ala Gly Ile Glu Gly Val Glu
469          360          365          370
471 Phe Gln Asn Thr Ile Ser Arg Ser Ile Tyr Arg Lys Ser Gly Pro Ile
472          375          380          385
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475          390          395          400
477 Ile Gly Tyr Ser His Arg Leu Cys His Ala Thr Phe Leu Glu Arg Ile
478          405          410          415
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481          420          425          430
483 Ala Ser Pro Thr Asn Glu Val Ser Pro Ser Arg Ile Thr Gln Ile Pro
484          435          440          445
486 Trp Val Lys Ala His Thr Leu Ala Ser Gly Ala Ser Val Ile Lys Gly
487          450          455          460
489 Pro Gly Phe Thr Gly Gly Asp Ile Leu Thr Arg Asn Ser Met Gly Glu
490          465          470          475
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493          480          485          490
495 Tyr Ile Arg Phe Arg Tyr Ala Ser Val Ala Asn Arg Ser Gly Thr Phe
496          495          500          505
498 Arg Tyr Ser Gln Pro Pro Ser Tyr Gly Ile Ser Phe Pro Lys Thr Met
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RAW SEQUENCE LISTING

DATE: 07/21/2003

PATENT APPLICATION: US/09/661,016A

TIME: 14:07:37

Input Set : A:\pto.amc.txt

Output Set: N:\CRF4\07212003\I661016A.raw

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504 565          570          575
505 Ile Gln Ser Gly Val Tyr Ile Asp Arg Ile Glu Phe Ile Pro Val Thr
506 580          585          590
507 Ala Thr Phe Glu Ala Glu Tyr Asp Leu Glu Arg Ala Gln Lys Val Val
508 595          600          605
509 Asn Ala Leu Phe Thr Ser Thr Asn Gln Leu Gly Leu Lys Thr Asp Val
510 610          615          620
511 Thr Asp Tyr His Ile Asp Gln Val Ser Asn Leu Val Ala Cys Leu Ser
512 625          630          635          640
513 Asp Glu Phe Cys Leu Asp Glu Lys Arg Glu Leu Ser Glu Lys Val Lys
514 645          650          655
515 His Ala Lys Arg Leu Ser Asp Glu Arg Asn Leu Leu Gln Asp Pro Asn
516 660          665          670
517 Phe Arg Gly Ile Asn Arg Gln Pro Asp Arg Gly Trp Arg Gly Ser Thr
518 675          680          685
519 Asp Ile Thr Ile Gln Gly Gly Asp Asp Val Phe Lys Glu Asn Tyr Val
520 690          695          700
521 Thr Leu Pro Gly Thr Phe Asp Glu Cys Tyr Pro Thr Tyr Leu Tyr Gln
522 705          710          715          720
523 Lys Ile Asp Glu Ser Lys Leu Lys Ala Tyr Thr Arg Tyr Gln Leu Arg
524 725          730          735
525 Gly Tyr Ile Glu Asp Ser Gln Asp Leu Glu Ile Tyr Leu Ile Arg Tyr
526 740          745          750
527 Asn Ala Lys His Glu Ile Val Asn Val Pro Gly Thr Gly Ser Leu Trp
528 755          760          765
529 Pro Leu Ser Val Glu Asn Gln Ile Gly Pro Cys Gly Glu Pro Asn Arg
530 770          775          780
531 Cys Ala Pro His Leu Glu Trp Asn Pro Asp Leu His Cys Ser Cys Arg
532 785          790          795          800
533 Asp Gly Glu Lys Cys Ala His His Ser His His Phe Ser Leu Asp Ile
534 805          810          815
535 Asp Val Gly Cys Thr Asp Leu Asn Glu Asp Leu Gly Val Trp Val Ile
536 820          825          830
537 Phe Lys Ile Lys Thr Gln Asp Gly His Ala Arg Leu Gly Asn Leu Glu
538 835          840          845
539 Phe Leu Glu Glu Lys Pro Leu Leu Gly Glu Ala Leu Ala Arg Val Lys
540 850          855          860
541 Arg Ala Glu Lys Lys Trp Arg Asp Lys Arg Glu Thr Leu Gln Leu Glu
542 865          870          875          880
543 Thr Thr Ile Val Tyr Lys Glu Ala Lys Glu Ser Val Asp Ala Leu Phe
544 885          890          895
545 Val Asn Ser Gln Tyr Asp Arg Leu Gln Ala Asp Thr Asn Ile Ala Met
546 900          905          910
547 Ile His Ala Ala Asp Lys Arg Val His Arg Ile Arg Glu Ala Tyr Leu
548 915          920          925
549 Pro Glu Leu Ser Val Ile Pro Gly Val Asn Ala Ala Ile Phe Glu Glu

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RAW SEQUENCE LISTING

PATENT APPLICATION: US/09/661,016A

DATE: 07/21/2003

TIME: 14:07:37

Input Set : A:\pto.amc.txt

Output Set: N:\CRF4\07212003\I661016A.raw

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586 Leu Glu Glu Arg Ile Phe Thr Ala Phe Ser Leu Tyr Asp Ala Arg Asn
587 945      950      955      960
589 Ile Ile Lys Asn Gly Asp Phe Asn Asn Gly Leu Leu Cys Trp Asn Val
590      965      970      975
591 Lys Gly His Val Glu Val Glu Glu Gln Asn Asn His Arg Ser Val Leu
592      980      985      990
593 Val Ile Pro Glu Trp Glu Ala Glu Val Ser Gln Glu Val Arg Val Cys
594      995      1000      1005
596 Pro Gly Arg Gly Tyr Ile Leu Arg Val Thr Ala Tyr Lys Glu Gly Tyr
597      1010      1015      1020
599 Gly Glu Gly Cys Val Thr Ile His Glu Ile Glu Asn Asn Thr Asp Glu
E--> 592 (025) /025      1030      1035      1040
604 Leu Lys Phe Asn Asn Cys Val Glu Glu Glu Val Tyr Pro Asn Asn Thr
605      1045      1050      1055
606 Val Thr Cys Ile Asn Tyr Thr Ala Thr Gln Glu Glu Tyr Glu Gly Thr
607      1060      1065      1070
609 Tyr Thr Ser Arg Asn Arg Gly Tyr Asp Glu Ala Tyr Gly Asn Asn Pro
610      1075      1080      1085
612 Ser Val Pro Ala Asp Tyr Ala Ser Val Tyr Glu Glu Lys Ser Tyr Thr
613      1090      1095      1100
615 Asp Arg Arg Arg Glu Asn Pro Cys Glu Ser Asn Arg Gly Tyr Gly Asp
E--> 606 (105) /105      1110      1115      1120
618 Tyr Thr Pro Leu Pro Ala Gly Tyr Val Thr Lys Glu Leu Glu Tyr Phe
619      1125      1130      1135
621 Pro Glu Thr Asp Lys Val Trp Ile Glu Ile Gly Glu Thr Glu Gly Thr
622      1140      1145      1150
624 Phe Ile Val Asp Ser Val Glu Leu Leu Leu Met Glu Glu
625      1155      1160      1165
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630 <111> LENGTH: 1189
631 <112> TYPE: PRT
632 <113> ORGANISM: Bacillus thuringiensis
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637 1      5      10      15
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640      20      25      30
642 Ser Ser Ile Asp Ile Ser Leu Ser Leu Val Gln Phe Met Val Ser Asn
643      35      40      45
645 Phe Val Pro Gly Gly Gly Phe Leu Val Gly Leu Ile Asp Phe Val Trp
646      50      55      60
648 Gly Ile Val Gly Pro Ser Gln Trp Asp Ala Phe Leu Val Gln Ile Glu
649      65      70      75      80
651 Gln Leu Ile Asn Glu Arg Ile Ala Glu Phe Ala Arg Asn Ala Ala Ile
652      85      90      95
654 Ala Asn Leu Glu Gly Leu Glu Asn Asn Leu Asn Ile Tyr Val Glu Ala
655      100      105      110
657 Phe Lys Glu Trp Glu Glu Asp Pro Asn Asn Pro Glu Thr Arg Thr Arg

```

When numbering
first amino
acid on a line,
please begin
number directly
under first
letter of amino
acid

e.g. Gly 1025 | 5 | Glu
 1025 | 6 |

p.7

Last number
on lines
are positioned
correctly

RAW SEQUENCE LISTING

DATE: 07/21/2003

PATENT APPLICATION: US/09/661,016A

TIME: 14:07:37

Input Set : A:\pto.amc.txt

Output Set: N:\CRF4\07212003\I661016A.raw

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981          120          125          140
983 Pro Ser Phe Arg Ile Ser Gly Phe Glu Val Pro Leu Leu Ser Val Tyr
984 141          150          155          160
986 Ala Gln Ala Ala Asn Leu His Leu Ala Ile Leu Arg Asp Ser Val Ile
987          165          170          175
989 Phe Gly Glu Arg Trp Gly Leu Thr Thr Ile Asn Val Asn Glu Asn Tyr
990          180          185          190
992 Asn Arg Leu Ile Arg His Ile Asp Glu Tyr Ala Asn His Cys Ala Asn
993          195          200          205
995 Thr Tyr Asn Arg Gly Leu Asn Asn Leu Pro Lys Ser Thr Tyr Gln Asp
996          210          215          220
998 Trp Ile Thr Tyr Asn Arg Leu Arg Arg Asn Leu Thr Leu Thr Val Leu
999 221          230          235          240
1001 Asp Ile Ala Ala Phe Phe Pro Asn Tyr Asp Asn Arg Arg Tyr Pro Ile
1002          245          250          255
1004 Gln Pro Val Gly Gln Leu Thr Arg Glu Val Tyr Thr Asp Pro Leu Ile
1005          260          265          270
1007 Asn Phe Asn Pro Gln Leu Gln Ser Val Ala Gln Leu Pro Thr Phe Asn
1008          275          280          285
1010 Val Met Glu Ser Ser Ala Ile Arg Asn Pro His Leu Phe Asp Ile Leu
1011          290          295          300
1013 Asn Asn Leu Thr Ile Phe Thr Asp Trp Phe Ser Val Gly Arg Asn Phe
1014 305          310          315          320
1016 Tyr Trp Gly Gly His Arg Val Ile Ser Ser Leu Ile Gly Gly Gly Asn
1017          325          330          335
1019 Ile Thr Ser Pro Ile Tyr Gly Arg Glu Ala Asn Gln Glu Pro Pro Arg
1020          340          345          350
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1023          355          360          365
1025 Leu Arg Leu Leu Gln Gln Pro Trp Pro Ala Pro Pro Phe Asn Leu Arg
1026          370          375          380
1028 Gly Val Glu Gly Val Glu Phe Ser Thr Pro Thr Asn Ser Phe Thr Tyr
1029 385          390          395          400
1031 Arg Gly Arg Gly Thr Val Asp Ser Leu Thr Glu Leu Pro Pro Glu Asp
1032          405          410          415
1034 Asn Ser Val Pro Pro Arg Glu Gly Tyr Ser His Arg Leu Cys His Ala
1035          420          425          430
1037 Tar Phe Val Gln Arg Ser Gly Thr Pro Phe Leu Thr Thr Gly Val Val
1038          435          440          445
1040 Phe Ser Trp Thr His Arg Ser Ala Thr Leu Thr Asn Thr Ile Asp Pro
1041          450          455          460
1043 Glu Arg Ile Asn Gln Ile Pro Leu Val Lys Gly Phe Arg Val Trp Gly
1044 465          470          475          480
1046 Gly Thr Ser Val Ile Thr Gly Pro Gly Phe Thr Gly Gly Asp Ile Leu
1047          485          490          495
1049 Arg Arg Asn Thr Phe Gly Asp Phe Val Ser Leu Gln Val Asn Ile Asn
1050          500          505          510

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RAW SEQUENCE LISTING

DATE: 07/21/2003

PATENT APPLICATION: US/09/661,016A

TIME: 14:07:37

Input Set : A:\pto.amc.txt

Output Set: N:\CRF4\07212003\I661016A.raw

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1057      545      550      555      560
1058 Gly Glu Asn Leu Thr Ser Arg Thr Phe Arg Tyr Thr Asp Phe Ser Asn
1059      565      570      575
1060 Pro Phe Ser Phe Arg Ala Asn Pro Asp Ile Ile Gly Ile Ser Glu Gln
1061      580      585      590
1062 Pro Leu Phe Gly Ala Gly Ser Ile Ser Ser Gly Glu Leu Tyr Ile Asp
1063      595      600      605
1064 Lys Ile Glu Ile Ile Leu Ala Asp Ala Thr Phe Glu Ala Glu Ser Asp
1065      610      615      620
1066 Leu Glu Arg Ala Gln Lys Ala Val Asn Ala Leu Phe Thr Ser Ser Asn
1067      625      630      635      640
1068 Gln Ile Gly Leu Lys Thr Asp Val Thr Asp Tyr His Ile Asp Gln Val
1069      645      650      655
1070 Ser Asn Leu Val Asp Cys Leu Ser Asp Glu Phe Cys Leu Asp Glu Lys
1071      660      665      670
1072 Arg Glu Leu Ser Glu Lys Val Lys His Ala Lys Arg Leu Ser Asp Glu
1073      675      680      685
1074 Arg Asn Leu Leu Gln Asp Pro Asn Phe Arg Gly Ile Asn Arg Gln Pro
1075      690      695      700
1076 Asp Arg Gly Trp Arg Gly Ser Thr Asp Ile Thr Ile Gln Gly Gly Asp
1077      705      710      715      720
1078 Asp Val Phe Lys Glu Asn Tyr Val Thr Leu Pro Gly Thr Val Asp Glu
1079      725      730      735
1080 Cys Tyr Pro Thr Tyr Leu Tyr Gln Lys Ile Asp Glu Ser Lys Leu Lys
1081      740      745      750
1082 Ala Tyr Thr Arg Tyr Glu Leu Arg Gly Tyr Ile Glu Asp Ser Gln Asp
1083      755      760      765
1084 Leu Glu Ile Tyr Leu Ile Arg Tyr Asn Ala Lys His Glu Ile Val Asn
1085      770      775      780
1086 Val Pro Gly Thr Gly Ser Leu Trp Pro Leu Ser Ala Gln Ser Pro Ile
1087      785      790      795      800
1088 Gly Lys Cys Gly Glu Pro Asn Arg Cys Ala Pro His Leu Glu Trp Asn
1089      805      810      815
1090 Pro Asp Leu Asp Cys Ser Cys Arg Asp Gly Glu Lys Cys Ala His His
1091      820      825      830
1092 Ser His His Phe Thr Leu Asp Ile Asp Val Gly Cys Thr Asp Leu Asn
1093      835      840      845
1094 Glu Asp Leu Gly Val Trp Val Ile Phe Lys Ile Lys Thr Gln Asp Gly
1095      850      855      860
1096 His Ala Arg Leu Gly Asn Leu Glu Phe Leu Glu Glu Lys Pro Leu Leu
1097      865      870      875      880
1098 Gly Glu Ala Leu Ala Arg Val Lys Arg Ala Glu Lys Lys Trp Arg Asp
1099      885      890      895
1100 Lys Arg Glu Lys Leu Gln Leu Glu Thr Asn Ile Val Tyr Lys Glu Ala

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RAW SEQUENCE LISTING

DATE: 07/21/2003

PATENT APPLICATION: US/09/661,016A

TIME: 14:07:37

Input Set : A:\pto.amc.txt

Output Set: N:\CRF4\07212003\I661016A.raw

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1131          930          935          940
1133 His Arg Ile Arg Glu Ala Tyr Leu Pro Glu Leu Ser Val Ile Pro Gly
1134 945          950          955          960
1136 Val Asn Ala Ala Ile Phe Glu Glu Leu Glu Gly Arg Ile Phe Thr Ala
1137          965          970          975
1139 Tyr Ser Leu Tyr Asp Ala Arg Asn Val Ile Lys Asn Gly Asp Phe Asn
1140          980          985          990
1142 Asn Gly Leu Leu Cys Trp Asn Val Lys Gly His Val Asp Val Glu Glu
1143          995          1000          1005
1145 Gln Asn Asn His Arg Ser Val Leu Val Ile Pro Glu Trp Glu Ala Glu
1146          1010          1015          1020
1148 Val Ser Gln Glu Val Arg Val Cys Pro Gly Arg Gly Tyr Ile Leu Arg
E--> 1149 025          1030          1035          1040x
1151 Val Thr Ala Tyr Lys Glu Gly Tyr Gly Glu Gly Cys Val Thr Ile His
1152          1045          1050          1055
1154 Glu Ile Glu Asp Asn Thr Asp Glu Leu Lys Phe Ser Asn Cys Val Glu
1155          1060          1065          1070
1157 Glu Glu Val Tyr Pro Asn Asn Thr Val Thr Cys Asn Asn Tyr Thr Gly
1158          1075          1080          1085
1160 Thr Gln Glu Glu Tyr Glu Gly Thr Tyr Thr Ser Arg Asn Gln Gly Tyr
1161          1090          1095          1100
1163 Asp Glu Ala Tyr Gly Asn Asn Pro Ser Val Pro Ala Asp Tyr Ala Ser
E--> 1164 105          1110          1115          1120OK
1166 Val Tyr Glu Glu Lys Ser Tyr Thr Asp Gly Arg Arg Glu Asn Pro Cys
1167          1125          1130          1135
1169 Glu Ser Asn Arg Gly Tyr Gly Asp Tyr Thr Pro Leu Pro Ala Gly Tyr
1170          1140          1145          1150
1172 Val Thr Lys Asp Leu Glu Tyr Phe Pro Glu Thr Asp Lys Val Trp Ile
1173          1155          1160          1165
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E--> 1179 185
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1185 <213> ORGANISM: Bacillus thuringiensis
1186 <214> FEATURE:
1187 <215> NAME/KEY: CDS
1188 <216> LOCATION: (1)..(3687)
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1192 tgg act tca aat agg aaa aat gag aat gaa att ata aat gct gta tgg 48
1193 leu thr ser asn arg lys asn glu asn glu ile ile asn ala val ser
1194 1 5 10 15
1195 aat aat tcc gca caa atg gat cta tta cca gat gct cgt att gag gat 96

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same
errors
as
previous
pages

This appeared directly after sequence 8

RAW SEQUENCE LISTING

DATE: 07/21/2003

PATENT APPLICATION: US/09/661,016A

TIME: 14:07:37

Input Set : A:\pto.amc.txt

Output Set: N:\CRF4\07212003\I661016A.raw

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1201	Ser	Leu	Cys	Ile	Ala	Glu	Gly	Asn	Asn	Ile	Asp	Pro	Phe	Val	Ser	Ala	
1202				35				40						45			
1204	tca	aca	ctc	caa	acg	ggt	att	aac	ata	gct	ggt	aga	ata	cta	ggc	gta	148
1205	Ser	Thr	Val	Gln	Thr	Gly	Ile	Asn	Ile	Ala	Gly	Arg	Ile	Leu	Gly	Val	
1206		50					55					60					
1208	tig	ggc	gta	cag	ttt	gct	gga	caa	cta	gct	agt	ttt	tat	agt	ttt	ctt	240
1209	Leu	Gly	Val	Pro	Phe	Ala	Gly	Gln	Leu	Ala	Ser	Phe	Tyr	Ser	Phe	Leu	
1210	65				70					75				80			
1212	ggt	ggt	gaa	tta	tgg	ccc	ggc	ggc	aga	cat	cag	tgg	gaa	att	ttc	cta	288
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1214				85						90				95			
1216	gaa	cat	gtc	gaa	caa	ctt	ata	aat	caa	caa	ata	aca	gaa	aat	gct	aug	336
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1218				100					105					110			
1220	aat	acg	gct	ctt	gct	gga	tta	caa	ggt	tta	gga	gat	tcc	ttc	aga	gcc	384
1221	Asn	Thr	Ala	Leu	Ala	Arg	Leu	Gln	Gly	Leu	Gly	Asp	Ser	Phe	Arg	Ala	
1222				115				120					125				
1224	tat	caa	cag	tca	ctt	gaa	gat	tgg	cta	gaa	aac	cgt	gat	gat	gca	aga	432
1225	Tyr	Gln	Gln	Ser	Leu	Gln	Asp	Trp	Leu	Glu	Asn	Arg	Asp	Asp	Ala	Arg	
1226		130				135					140						
1228	acg	aga	agt	gtc	ctt	cat	acc	caa	tat	ata	gct	tta	gaa	ctt	gat	ttt	480
1229	Thr	Arg	Ser	Val	Leu	His	Thr	Gln	Tyr	Ile	Ala	Leu	Glu	Leu	Asp	Phe	
1230	145				150						155				160		
1232	ctt	aat	ggc	atg	cag	ctt	ttc	gca	att	aga	aac	caa	gaa	gtt	cca	tta	528
1233	Leu	Asn	Ala	Met	Pro	Leu	Phe	Ala	Ile	Arg	Asn	Gln	Glu	Val	Pro	Leu	
1234				165					170					175			
1236	tig	atg	gta	tat	gct	caa	gct	gca	aat	tta	caa	cta	tta	tta	tig	aga	576
1237	Leu	Met	Val	Tyr	Ala	Gln	Ala	Ala	Asn	Leu	His	Leu	Leu	Leu	Leu	Arg	
1238				180				185						190			
1240	gat	gcc	tct	ctt	ttt	ggt	agt	gaa	ttt	ggg	ctt	aca	tgg	cag	gaa	att	624
1241	Asp	Ala	Ser	Leu	Phe	Gly	Ser	Glu	Phe	Gly	Leu	Thr	Ser	Gln	Glu	Ile	
1242				195				200					205				
1244	caa	ggc	tat	tat	gag	ggc	caa	gtg	gaa	gga	acg	aga	gat	tat	tcc	gac	672
1245	Gln	Arg	Tyr	Tyr	Glu	Arg	Gln	Val	Glu	Arg	Thr	Arg	Asp	Tyr	Ser	Asp	
1246		210				215						220					
1248	tat	tgc	gta	gaa	tgg	tat	aat	aca	ggt	cta	aat	agg	tig	aga	ggg	aca	720
1249	Tyr	Cys	Val	Glu	Trp	Tyr	Asn	Thr	Gly	Leu	Asn	Ser	Leu	Arg	Gly	Thr	
1250	225				230						235				240		
1252	aat	gcc	gca	agt	tgg	gta	ggg	tat	aat	caa	ttc	cgt	ara	gat	cta	acg	768
1253	Asn	Ala	Ala	Ser	Trp	Val	Arg	Tyr	Asn	Gln	Phe	Arg	Arg	Asp	Leu	Thr	
1254				245					250					255			
1256	tta	gga	gta	tta	gat	cta	gtg	gca	cta	ttc	cca	agg	tat	gac	aat	ggc	816
1257	Leu	Gly	Val	Leu	Asp	Leu	Val	Ala	Leu	Phe	Pro	Ser	Tyr	Asp	Thr	Arg	
1258				260					265					270			
1260	act	tat	cca	ata	aat	acg	agt	gct	cag	tta	aca	aga	gaa	gtt	tat	aca	864
1261	Thr	Tyr	Pro	Ile	Asn	Thr	Ser	Ala	Gln	Leu	Thr	Arg	Glu	Val	Tyr	Thr	

RAW SEQUENCE LISTING

DATE: 07/21/2003

PATENT APPLICATION: US/09/661,016A

TIME: 14:01:37

Input Set : A:\pto.amc.txt

Output Set: N:\CRF4\07212003\I661016A.raw

1362	275	280	285	
1364	gac gca att gaa gca aca ggg gta aat atg gca agt atg aat tgg tat	912		
1365	Asp Ala Ile Gly Ala Thr Gly Val Asn Met Ala Ser Met Asn Trp Tyr			
1366	290	295	300	
1368	aat aat aat gca cct tgg ttc tct ggc ata gag gct ggc gct atc cga	960		
1369	Asn Asn Asn Ala Pro Ser Phe Ser Ala Ile Glu Ala Ala Ala Ile Arg			
1370	305	310	315	320
1371	agg cgg cat cta ctt gat ttt cta gaa caa ctt aca att ttt agc gct	1008		
1373	Ser Pro His Leu Leu Asp Phe Leu Glu Gln Leu Thr Ile Phe Ser Ala			
1374	325	330	335	
1376	tca tca cga tgg agt aat act agg cat atg act tat tgg cgg ggc cag	1056		
1377	Ser Ser Arg Trp Ser Asn Thr Arg His Met Thr Tyr Trp Arg Gly His			
1378	340	345	350	
1380	agg att caa tct cgg cca ata gga ggc gga tta aat acc tca acc cat	1104		
1381	Thr Ile Gln Ser Arg Pro Ile Gly Gly Gly Leu Asn Thr Ser Thr His			
1382	355	360	365	
1384	ggg gct acc aat act tct att aat cct gta aca tta cgg ttc gca tct	1152		
1385	Gly Ala Thr Asn Thr Ser Ile Asn Pro Val Thr Leu Arg Phe Ala Ser			
1386	370	375	380	
1388	cga gac gtt tat agg act gaa tca tat gca gga gtg ctt cta tgg gga	1200		
1389	Arg Asp Val Tyr Arg Thr Glu Ser Tyr Ala Gly Val Leu Leu Trp Gly			
1390	385	390	395	400
1392	att tac ctt gaa cct att cat agt gtc cct act gtc agt ttt aat ttt	1248		
1393	Ile Tyr Leu Glu Pro Ile His Gly Val Pro Thr Val Arg Phe Asn Phe			
1394	405	410	415	
1396	acg aac cct cag aat att tct gat aga ggt acc gct acc tat agt caa	1296		
1397	Thr Asn Pro Gln Asn Ile Ser Asp Arg Gly Thr Ala Asn Tyr Ser Gln			
1398	420	425	430	
1399	cct tat gag tca cct gga ctt caa tta aaa gat tca gaa act gaa tta	1344		
1401	Pro Tyr Glu Ser Pro Gly Leu Gln Leu Lys Asp Ser Glu Thr Glu Leu			
1402	435	440	445	
1404	cca cca gaa aca aca gaa cga cca aat tat gaa tct tcc agt cag agg	1392		
1405	Pro Pro Glu Thr Thr Glu Arg Pro Asn Tyr Glu Ser Tyr Ser His Arg			
1406	450	455	460	
1408	tta tct cat ata ggt ata att tta caa tcc agg ggc aat gta ccg gta	1440		
1409	Leu Ser His Ile Gly Ile Ile Leu Gln Ser Arg Val Asn Val Pro Val			
1410	465	470	475	480
1412	tat tct tgg acg cat cgt agt gca gat cgt acg aat acg att gga cca	1488		
1413	Tyr Ser Trp Thr His Arg Ser Ala Asp Arg Thr Asn Thr Ile Gly Pro			
1414	485	490	495	
1416	aat aga atc acc caa atc cca atg gta aaa gca tcc gaa ctt cct caa	1536		
1417	Asn Arg Ile Thr Gln Ile Pro Met Val Lys Ala Ser Glu Leu Pro Gln			
1418	500	505	510	
1420	ggg acc act gtt gtt agt gga cca gga ttt act ggt gag gat att ctt	1584		
1421	Gly Thr Thr Val Val Arg Gly Pro Gly Phe Thr Gly Gly Asp Ile Leu			
1422	515	520	525	
1424	cga aga acg aat act ggt gga ttt gga ccg ata aga gta act gtt aac	1632		
1425	Arg Arg Thr Asn Thr Gly Gly Phe Gly Pro Ile Arg Val Thr Val Asn			
1426	530	535	540	

RAW SEQUENCE LISTING

DATE: 07/21/2003

PATENT APPLICATION: US/09/661,016A

TIME: 14:07:37

Input Set : A:\pto.amc.txt

Output Set: N:\CRF4\07212003\I661016A.raw

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1328 gga cca tta aca caa aga tat cgt ata gga ttc cgc tat gct tca act 1680
1329 Gly Pro Leu Thr Gln Arg Tyr Arg Ile Gly Phe Arg Tyr Ala Ser Thr
1330 545 550 555 560
1331 gta gat ttt gat ttc ttt gta tga cgt gga ggt act act gta aat aat 1728
1332 Val Asp Phe Asp Phe Phe Val Ser Arg Gly Gly Thr Thr Val Asn Asn
1333 565 570 575
1334 ttt aga ttc cta cgt aca atg aac agt gga gac gaa cta aaa tac gga 1776
1335 Phe Arg Phe Leu Arg Thr Met Asn Ser Gly Asp Glu Leu Lys Tyr Gly
1336 580 585 590
1337 aat ttt gtg aga cgt gct ttt act aca cgt ttt act ttt aca caa att 1824
1338 Asn Phe Val Arg Arg Ala Phe Thr Thr Pro Phe Thr Phe Thr Gln Ile
1339 595 600 605
1340 caa gat ata att cga aag tct att caa ggc ctt agt gaa aat ggg gaa 1872
1341 Gln Asp Ile Ile Arg Thr Ser Ile Gln Gly Leu Ser Gly Asn Gly Glu
1342 610 615 620
1343 gtg tat ata gat aaa att gaa att att caa gtt act gaa acc ttc gaa 1920
1344 Val Tyr Ile Asp Lys Ile Glu Ile Ile Pro Val Thr Ala Thr Phe Glu
1345 625 630 635 640
1346 gga gaa tat gat tta gaa aga gag caa gag ggg gtg aat gct ctg ttt 1968
1347 Ala Glu Tyr Asp Leu Glu Arg Ala Gln Glu Ala Val Asn Ala Leu Phe
1348 645 650 655
1349 act aat aag aat caa aga aga ttg aaa aca gat gtg aca gat tat cat 2016
1350 Thr Asn Thr Asn Pro Arg Arg Leu Lys Thr Asp Val Thr Asp Tyr His
1351 660 665 670
1352 att gat caa gta tcc aat tta gtg ggg tgt tta tgg gat gaa ttc tgc 2064
1353 Ile Asp Gln Val Ser Asn Leu Val Ala Cys Leu Ser Asp Glu Phe Cys
1354 675 680 685
1355 ttg gat gaa aag aga gaa tta ctt gag aaa gtg aaa tat ggg aaa cga 2112
1356 Leu Asp Glu Lys Arg Glu Leu Leu Glu Lys Val Lys Tyr Ala Lys Arg
1357 690 695 700
1358 ctg apt gat gaa aca aac tta ctg caa gat caa aac ttc aca tcc atc 2160
1359 Leu Ser Asp Glu Arg Asn Leu Leu Gln Asp Pro Asn Phe Thr Ser Ile
1360 705 710 715 720
1361 aat aag caa caa gac ttc ata tct act aat gag caa tgg aat ttc aca 2208
1362 Asn Lys Gln Pro Asp Phe Ile Ser Thr Asn Glu Gln Ser Asn Phe Thr
1363 725 730 735
1364 tct atc cat gaa caa tct gaa cct gga tgg tgg gga aat gag aac att 2256
1365 Ser Ile His Glu Gln Ser Glu His Gly Trp Trp Gly Ser Glu Asn Ile
1366 740 745 750
1367 acc atc cag gaa gga aat gac gta ttt aca gag aat tac gtc aca cta 2304
1368 Thr Ile Gln Glu Gly Asn Asp Val Phe Lys Glu Asn Tyr Val Thr Leu
1369 755 760 765
1370 cag ggt act ttt aat gag tgt tat cag aag tat tta tat caa aaa ata 2352
1371 Pro Gly Thr Phe Asn Glu Cys Tyr Pro Thr Tyr Leu Tyr Gln Lys Ile
1372 770 775 780
1373 ggg gag tgg gaa tta aaa gct tat act cgc tac caa tta aga ggt tat 2400
1374 Gly Glu Ser Glu Leu Lys Ala Tyr Thr Arg Tyr Gln Leu Arg Gly Tyr
1375 785 790 795 800
1376 att gaa gat agt caa gat tta gag ata tat ttg att cgt tat aat gag 2448

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RAW SEQUENCE LISTING

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TIME: 14:07:37

Input Set : A:\pto.amc.txt

Output Set: N:\CRF4\07212003\I661016A.raw

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1393 Ile Glu Asp Ser Gln Asp Leu Glu Ile Tyr Leu Ile Arg Tyr Asn Ala
1394          805          810          815
1396 aaa cat gaa aca ttg gat gtt cca ggt acc gag tcc cta tgg cgg ctt      2496
1397 Lys His Glu Thr Leu Asp Val Pro Gly Thr Glu Ser Leu Trp Pro Leu
1398          820          825          830
1400 tca gtt gaa agc cca atc gga agg tgc gga gaa cgg aat cga tgc gca      2544
1401 Ser Val Glu Ser Pro Ile Gly Arg Cys Gly Glu Pro Asn Arg Cys Ala
1402          835          840          845
1404 cca cat ttt gaa tgg aat cct gat cta gat tgt tcc tgc aga gat gga      2592
1405 Pro His Phe Glu Trp Asn Pro Asp Leu Asp Cys Ser Cys Arg Asp Gly
1406          850          855          860
1408 gaa aaa tgt ggc cat cat tcc cat cat ttc tct ttg gat att gat gtt      2640
1409 Glu Lys Cys Ala His His Ser His His Phe Ser Leu Asp Ile Asp Val
1410          865          870          875          880
1411 gga tgc aca gac ttg cat gag aat cta ggc gtg tgg gtg gta ttc aag      2688
1412 Gly Cys Thr Asp Leu His Glu Asn Leu Gly Val Trp Val Val Phe Lys
1413          885          890          895
1415 att aag aag cag gaa ggt cat gca aga cta ggc aat ctg gaa ttt att      2736
1416 Ile Lys Thr Gln Glu Gly His Ala Arg Leu Gly Asn Leu Glu Phe Ile
1417          900          905          910
1419 gaa gag aaa cca tta tta gga gaa gca cta tct cgt gtg aag agg gca      2784
1420 Glu Glu Lys Pro Leu Leu Gly Glu Ala Leu Ser Arg Val Lys Arg Ala
1421          915          920          925
1423 gag aaa aaa tgg aga gac aaa cgt gaa aaa cta caa ttg gaa aca aaa      2832
1424 Glu Lys Lys Trp Arg Asp Lys Arg Glu Lys Leu Gln Leu Glu Thr Lys
1425          930          935          940
1427 cga gta tat aca gag gca aaa gaa got gtg gat got tta ttc gta gat      2880
1428 Arg Val Tyr Thr Glu Ala Lys Glu Ala Val Asp Ala Leu Phe Val Asp
1429          945          950          955          960
1431 tct caa tat gat aga tta caa ggc gat aca aac atc ggc atg att cat      2928
1432 Ser Gln Tyr Asp Arg Leu Gln Ala Asp Thr Asn Ile Gly Met Ile His
1433          965          970          975
1435 ggc gca gat aaa ctt gtt cat cga att cga gag ggc tat ctt tca gaa      2976
1436 Ala Ala Asp Lys Leu Val His Arg Ile Arg Glu Ala Tyr Leu Ser Glu
1437          980          985          990
1439 tta cct gtt atc cca ggt gta aat ggc gaa att ttt gaa gaa tta gaa      3024
1440 Leu Pro Val Ile Pro Gly Val Asn Ala Glu Ile Phe Glu Glu Leu Glu
1441          995          1000          1005
1443 ggt cac att atc act gca atc tcc tta tac gat ggc aga aat gtc      3060
1444 Gly His Ile Ile Thr Ala Ile Ser Leu Tyr Asp Ala Arg Asn Val
1445          1010          1015          1020
1447 gtt aaa aat ggt gat ttt aat aat gga tta aca tgt tgg aat gta      3114
1448 Val Lys Asn Gly Asp Phe Asn Asn Gly Leu Thr Cys Trp Asn Val
1449          1025          1030          1035
1451 aaa ggc cat gta gat gta caa cag agc cat cat cgt tct gac ctt      3154
1452 Lys Gly His Val Asp Val Gln Gln Ser His His Arg Ser Asp Leu
1453          1040          1045          1050
1455 gtt atc cca gaa tgg gaa gca gaa gtg tca caa gca gtt cgc gtc      3204
1456 Val Ile Pro Glu Trp Glu Ala Glu Val Ser Gln Ala Val Arg Val

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RAW SEQUENCE LISTING

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PATENT APPLICATION: US/09/661,016A

TIME: 14:07:37

Input Set : A:\pto.amc.txt

Output Set: N:\CRF4\07212003\I661016A.raw

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1493      1055      1060      1065
1493 tgt cca ggg tat ggc tat atc ctt cgt gtc aca gag tac aaa gag 3249
1494 Cys Pro Gly Cys Gly Tyr Ile Leu Arg Val Thr Ala Tyr Lys Glu
1495      1070      1075      1080
1495 gaa tat gga gag agc tac gta acg atc cat gaa atc gag aac aat 3294
1496 Gly Tyr Gly Glu Gly Cys Val Thr Ile His Glu Ile Glu Asn Asn
1497      1085      1090      1095
1497 aca gac gaa cta aaa tit aca aac cgt gaa gaa gag gaa gtg tat 3329
1498 Thr Asp Glu Leu Lys Phe Lys Asn Arg Glu Glu Glu Glu Val Tyr
1499      1100      1105      1110
1499 cca acg gat aca gga acg tgt aat gat tat act gca cac caa ggt 3384
1500 Pro Thr Asp Thr Gly Thr Cys Asn Asp Tyr Thr Ala His Gln Gly
1501      1115      1120      1125
1501 aca gct gga tgc gca gat gca tgt aat tcc cgt aat gct gga tat 3429
1502 Thr Ala Gly Cys Ala Asp Ala Cys Asn Ser Arg Asn Ala Gly Tyr
1503      1130      1135      1140
1503 gag cat gca tat gaa gtt gtt act aca gca tct gtt aat tac aaa 3474
1504 Glu Asp Ala Tyr Glu Val Asp Thr Thr Ala Ser Val Asn Tyr Lys
1505      1145      1150      1155
1505 cag act tat gaa gaa gaa aac tat aca gat gta aca aga gat aat 3519
1506 Pro Thr Tyr Glu Glu Glu Thr Tyr Thr Asp Val Arg Arg Asp Asn
1507      1160      1165      1170
1507 cat tgt gaa tat gac aga ggg tat gtc aat tat cca cca gta cca 3564
1508 His Cys Glu Tyr Asp Arg Gly Tyr Val Asn Tyr Pro Pro Val Pro
1509      1175      1180      1185
1509 gct ggt tat gtg aca aaa gaa tta gaa tac ttc cca gaa aca gat 3609
1510 Ala Gly Tyr Val Thr Lys Glu Leu Glu Tyr Phe Pro Glu Thr Asp
1511      1190      1195      1200
1511 aca ata tgg att gag att gga gaa acg gaa gga aag ttt att gta 3654
1512 Thr Val Trp Ile Glu Ile Gly Glu Thr Glu Gly Lys Phe Ile Val
1513      1205      1210      1215
1513 aat agc gtg gaa cta ctc ctc atg gaa gaa tag 3687
1514 Asp Ser Val Glu Leu Leu Leu Met Glu Glu
1515      1220
1515

```

1505 -110- SEQ ID NO: 2?

1506 -111- LENGTH: 1226

1507 -112- TYPE: PRT

1508 -113- ORGANISM: Bacillus thuringiensis

E--> 1510 <400> SEQUENCE: 10?

```

1512 Leu Thr Ser Asn Arg Lys Asn Glu Asn Glu Ile Ile Asn Ala Val Ser
1513      1      5      10      15
1516 Asn His Ser Ala Gln Met Asp Leu Leu Pro Asp Ala Arg Ile Glu Asp
1517      20      25      30
1520 Ser Leu Cys Ile Ala Glu Gly Asn Asn Ile Asp Pro Phe Val Ser Ala
1521      35      40      45
1524 Ser Thr Val Gln Thr Gly Ile Asn Ile Ala Gly Arg Ile Leu Gly Val
1525      50      55      60
1528 Leu Gly Val Pro Phe Ala Gly Gln Leu Ala Ser Phe Tyr Ser Phe Leu
1529      65      70      75      80

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RAW SEQUENCE LISTING

DATE: 07/21/2003

PATENT APPLICATION: US/09/661,016A

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Input Set : A:\pto.amc.txt

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1532 Val Gly Glu Leu Trp Pro Arg Gly Arg Asp Gln Trp Glu Ile Phe Leu
1533      85      90      95
1536 Glu His Val Glu Gln Leu Ile Asn Gln Gln Ile Thr Glu Asn Ala Arg
1537      100      105      110
1540 Asn Thr Ala Leu Ala Arg Leu Gln Gly Leu Gly Asp Ser Phe Arg Ala
1541      115      120      125
1544 Tyr Gln Gln Ser Leu Glu Asp Trp Leu Glu Asn Arg Asp Asp Ala Arg
1545      130      135      140
1548 Thr Arg Ser Val Leu His Thr Gln Tyr Ile Ala Leu Glu Leu Asp Phe
1549      145      150      155      160
1551 Leu Asn Ala Met Pro Leu Phe Ala Ile Arg Asn Gln Glu Val Pro Leu
1552      165      170      175
1556 Leu Met Val Tyr Ala Gln Ala Ala Asn Leu His Leu Leu Leu Leu Arg
1557      180      185      190
1560 Asp Ala Ser Leu Phe Gly Ser Glu Phe Gly Leu Thr Ser Gln Glu Ile
1561      195      200      205
1564 Gln Arg Tyr Tyr Glu Arg Gln Val Glu Arg Thr Arg Asp Tyr Ser Asp
1565      210      215      220
1568 Tyr Cys Val Glu Trp Tyr Asn Thr Gly Leu Asn Ser Leu Arg Gly Thr
1569      225      230      235      240
1571 Asn Ala Ala Ser Trp Val Arg Tyr Asn Gln Phe Arg Arg Asp Leu Thr
1572      245      250      255
1576 Leu Gly Val Leu Asp Leu Val Ala Leu Phe Pro Ser Tyr Asp Thr Arg
1577      260      265      270
1580 Thr Tyr Pro Ile Asn Thr Ser Ala Gln Leu Thr Arg Glu Val Tyr Thr
1581      275      280      285
1584 Asp Ala Ile Gly Ala Thr Gly Val Asn Met Ala Ser Met Asn Trp Tyr
1585      290      295      300
1588 Asn Asn Asn Ala Pro Ser Phe Ser Ala Ile Glu Ala Ala Ala Ile Arg
1589      305      310      315      320
1591 Ser Pro His Leu Leu Asp Phe Leu Glu Gln Leu Thr Ile Phe Ser Ala
1592      325      330      335
1596 Ser Ser Arg Trp Ser Asn Thr Arg His Met Thr Tyr Trp Arg Gly His
1597      340      345      350
1600 Thr Ile Gln Ser Arg Pro Ile Gly Gly Gly Leu Asn Thr Ser Thr His
1601      355      360      365
1604 Gly Ala Thr Asn Thr Ser Ile Asn Pro Val Thr Leu Arg Phe Ala Ser
1605      370      375      380
1608 Arg Asp Val Tyr Arg Thr Glu Ser Tyr Ala Gly Val Leu Leu Trp Gly
1609      385      390      395      400
1611 Ile Tyr Leu Glu Pro Ile His Gly Val Pro Thr Val Arg Phe Asn Phe
1612      405      410      415
1616 Thr Asn Pro Gln Asn Ile Ser Asp Arg Gly Thr Ala Asn Tyr Ser Gln
1617      420      425      430
1620 Pro Tyr Glu Ser Pro Gly Leu Gln Leu Lys Asp Ser Glu Thr Glu Leu
1621      435      440      445
1624 Pro Pro Glu Thr Thr Glu Arg Pro Asn Tyr Glu Ser Tyr Ser His Arg
1625      450      455      460
1628 Leu Ser His Ile Gly Ile Ile Leu Gln Ser Arg Val Asn Val Pro Val

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Input Set : A:\pto.amc.txt

Output Set: N:\CRF4\07212003\I661016A.raw

1629	465					470						475			480	
1630	Tyr	Ser	Trp	Thr	His	Arg	Ser	Ala	Asp	Arg	Thr	Asn	Thr	Ile	Gly	Pro
1631					485					490					495	
1632	Asn	Arg	Ile	Thr	Gln	Ile	Pro	Met	Val	Lys	Ala	Ser	Glu	Leu	Pro	Gln
1633				500					505					510		
1634	Gly	Thr	Thr	Val	Val	Arg	Gly	Pro	Gly	Phe	Thr	Gly	Gly	Asp	Ile	Leu
1635			515				520					525				
1636	Arg	Arg	Thr	Asn	Thr	Gly	Gly	Phe	Gly	Pro	Ile	Arg	Val	Thr	Val	Asn
1637		530				535					540					
1638	Gly	Pro	Leu	Thr	Gln	Arg	Tyr	Arg	Ile	Gly	Phe	Arg	Tyr	Ala	Ser	Thr
1639	545				550					555					560	
1640	Val	Asp	Phe	Asp	Phe	Phe	Val	Ser	Arg	Gly	Gly	Thr	Thr	Val	Asn	Asn
1641				565					570					575		
1642	Phe	Arg	Phe	Leu	Arg	Thr	Met	Asn	Ser	Gly	Asp	Gln	Leu	Lys	Tyr	Gly
1643			580				585					590				
1644	Asn	Phe	Val	Arg	Arg	Ala	Phe	Thr	Thr	Pro	Phe	Thr	Phe	Thr	Gln	Ile
1645			595			600						605				
1646	Gln	Asp	Ile	Ile	Arg	Thr	Ser	Ile	Gln	Gly	Leu	Ser	Gly	Asn	Gly	Gln
1647		610				615					620					
1648	Val	Tyr	Ile	Asp	Lys	Ile	Glu	Ile	Ile	Pro	Val	Thr	Ala	Thr	Phe	Gln
1649	625				630					635				640		
1650	Ala	Glu	Tyr	Asp	Leu	Glu	Arg	Ala	Gln	Glu	Ala	Val	Asn	Ala	Leu	Phe
1651				645					650					655		
1652	Thr	Asn	Thr	Asn	Pro	Arg	Arg	Leu	Lys	Thr	Asp	Val	Thr	Asp	Tyr	His
1653			660				665					670				
1654	Ile	Asp	Gln	Val	Ser	Asn	Leu	Val	Ala	Cys	Leu	Ser	Asp	Glu	Phe	Cys
1655			675			680						685				
1656	Leu	Asp	Glu	Lys	Arg	Glu	Leu	Leu	Gln	Lys	Val	Lys	Tyr	Ala	Lys	Arg
1657		690				695					700					
1658	Leu	Ser	Asp	Glu	Arg	Asn	Leu	Leu	Gln	Asp	Pro	Asn	Phe	Thr	Ser	Ile
1659	705				710					715				720		
1660	Asn	Lys	Gln	Pro	Asp	Phe	Ile	Ser	Thr	Asn	Gln	Gln	Ser	Asn	Phe	Thr
1661				725					730					735		
1662	Ser	Ile	His	Glu	Gln	Ser	Glu	His	Gly	Trp	Trp	Gly	Ser	Glu	Asn	Ile
1663			740				745					750				
1664	Thr	Ile	Gln	Glu	Gly	Asn	Asp	Val	Phe	Lys	Gln	Asn	Tyr	Val	Thr	Leu
1665			755			760						765				
1666	Pro	Gly	Thr	Phe	Asn	Glu	Cys	Tyr	Pro	Thr	Tyr	Leu	Tyr	Gln	Lys	Ile
1667		770				775					780					
1668	Gly	Glu	Ser	Glu	Leu	Lys	Ala	Tyr	Thr	Arg	Tyr	Gln	Leu	Arg	Gly	Tyr
1669	785				790					795				800		
1670	Ile	Glu	Asp	Ser	Gln	Asp	Leu	Glu	Ile	Tyr	Leu	Ile	Arg	Tyr	Asn	Ala
1671				805					810					815		
1672	Lys	His	Glu	Thr	Leu	Asp	Val	Pro	Gly	Thr	Glu	Ser	Leu	Trp	Pro	Leu
1673			820				825					830				
1674	Ser	Val	Glu	Ser	Pro	Ile	Gly	Arg	Cys	Gly	Glu	Pro	Asn	Arg	Cys	Ala
1675			835			840						845				
1676	Pro	His	Phe	Glu	Trp	Asn	Pro	Asp	Leu	Asp	Cys	Ser	Cys	Arg	Asp	Gly
1677		850				855					860					

RAW SEQUENCE LISTING

PATENT APPLICATION: US/09/661,016A

DATE: 07/21/2003

TIME: 14:07:37

Input Set : A:\pto.amc.txt

Output Set : N:\CRF4\07212003\I661016A.raw

```

1725 Glu Lys Cys Ala His His Ser His His Phe Ser Leu Asp Ile Asp Val
1726 865 870 875 880
1727 Gly Cys Thr Asp Leu His Glu Asn Leu Gly Val Trp Val Val Phe Lys
1728 885 890 895
1729 Ile Lys Thr Gln Glu Gly His Ala Arg Leu Gly Asn Leu Glu Phe Ile
1730 900 905 910
1731 Glu Glu Lys Pro Leu Leu Gly Glu Ala Leu Ser Arg Val Lys Arg Ala
1732 915 920 925
1733 Glu Lys Lys Trp Arg Asp Lys Arg Glu Lys Leu Gln Leu Glu Thr Lys
1734 930 935 940
1735 Arg Val Tyr Thr Glu Ala Lys Glu Ala Val Asp Ala Ile Phe Val Asp
1736 945 950 955 960
1737 Ser Gln Tyr Asp Arg Leu Gln Ala Asp Thr Asn Ile Gly Met Ile His
1738 965 970 975
1739 Ala Ala Asp Lys Leu Val His Arg Ile Arg Glu Ala Tyr Leu Ser Glu
1740 980 985 990
1741 Leu Pro Val Ile Pro Gly Val Asn Ala Glu Ile Phe Glu Glu Leu Glu
1742 995 1000 1005
1743 Gly His Ile Ile Thr Ala Ile Ser Leu Tyr Asp Ala Arg Asn Val
1744 1010 1015 1020
1745 Val Lys Asn Gly Asp Phe Asn Asn Gly Leu Thr Cys Trp Asn Val
1746 1025 1030 1035
1747 Lys Gly His Val Asp Val Gln Gln Ser His His Asn Ser Asp Leu
1748 1040 1045 1050
1749 Val Ile Pro Glu Trp Glu Ala Glu Val Ser Gln Ala Val Arg Val
1750 1055 1060 1065
1751 Cys Pro Gly Cys Gly Tyr Ile Leu Arg Val Thr Ala Tyr Lys Glu
1752 1070 1075 1080
1753 Gly Tyr Gly Glu Gly Cys Val Thr Ile His Glu Ile Glu Asn Asn
1754 1085 1090 1095
1755 Thr Asp Glu Leu Lys Phe Lys Asn Arg Glu Glu Gln Glu Val Tyr
1756 1100 1105 1110
1757 Pro Thr Asp Thr Gly Thr Cys Asn Asp Tyr Thr Ala His Gln Gly
1758 1115 1120 1125
1759 Thr Ala Gly Cys Ala Asp Ala Cys Asn Ser Arg Asn Ala Gly Tyr
1760 1130 1135 1140
1761 Glu Asp Ala Tyr Glu Val Arg Thr Thr Ala Ser Val Asn Tyr Lys
1762 1145 1150 1155
1763 Pro Thr Tyr Glu Glu Glu Thr Tyr Thr Asp Val Arg Arg Asp Asn
1764 1160 1165 1170
1765 His Cys Glu Tyr Asp Arg Gly Tyr Val Asn Tyr Pro Pro Val Pro
1766 1175 1180 1185
1767 Ala Gly Tyr Val Thr Lys Glu Leu Glu Tyr Phe Pro Glu Thr Asp
1768 1190 1195 1200
1769 Thr Val Trp Ile Glu Ile Gly Glu Thr Glu Gly Lys Phe Ile Val
1770 1205 1210 1215
1771 Asp Ser Val Glu Leu Leu Ile Met Glu Glu
1772 1220 1225

```


VERIFICATION SUMMARY

DATE: 07/21/2003

PATENT APPLICATION: US/09/661,016A

TIME: 14:07:38

Input Set : A:\pto.amc.txt

Output Set: N:\CRF4\07212003\I661016A.raw

L:13 M:28 W: Missing Blank Line separator, <140> field identifier
L:13 M:27 C: Current Application Number differs, Replaced Current Application Number
L:15 M:27 C: Current Filing Date differs, Replaced Current Filing Date
L:592 M:342 E: (32) Invalid/Missing Amino Acid Numbering, SEQ ID:6
M:332 Repeated in SeqNo=6
L:943 M:346 W: Invalid Amino Acid Number in Coding Region, SEQ ID:7
L:1149 M:33 E: (32) Invalid/Missing Amino Acid Numbering, SEQ ID:8
M:332 Repeated in SeqNo=8
L:1182 M:31 E: (34) Invalid or duplicate Sequence ID Number, SEQ ID NO: 1
L:1191 M:31 E: (34) Invalid or duplicate Sequence ID Number, SEQUENCE ID NOS:1 differs:9
L:1510 M:11 E: (34) Invalid or duplicate Sequence ID Number, SEQUENCE ID NOS:2 differs:10
L:23 M:203 E: No. of Seq. differs, <160> Number Of Sequences:Input (8) Counted (10)